U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
PB-284 228

Who's Who III in the Interagency Energy/Environment R and D Program

Automation Industries, Inc, Silver Spring, Md Vitro Labs Div

Prepared for

Environmental Protection Agency, Washington, D C Office of Energy, Minerals and Industry

Jul 77

PB 284 228

EPA DECISION SERIES

United States Environmental Protection Agency | Office of Research and Development | Energy, Minerals and Industry | EPA-600/9-77-011 | June 1977

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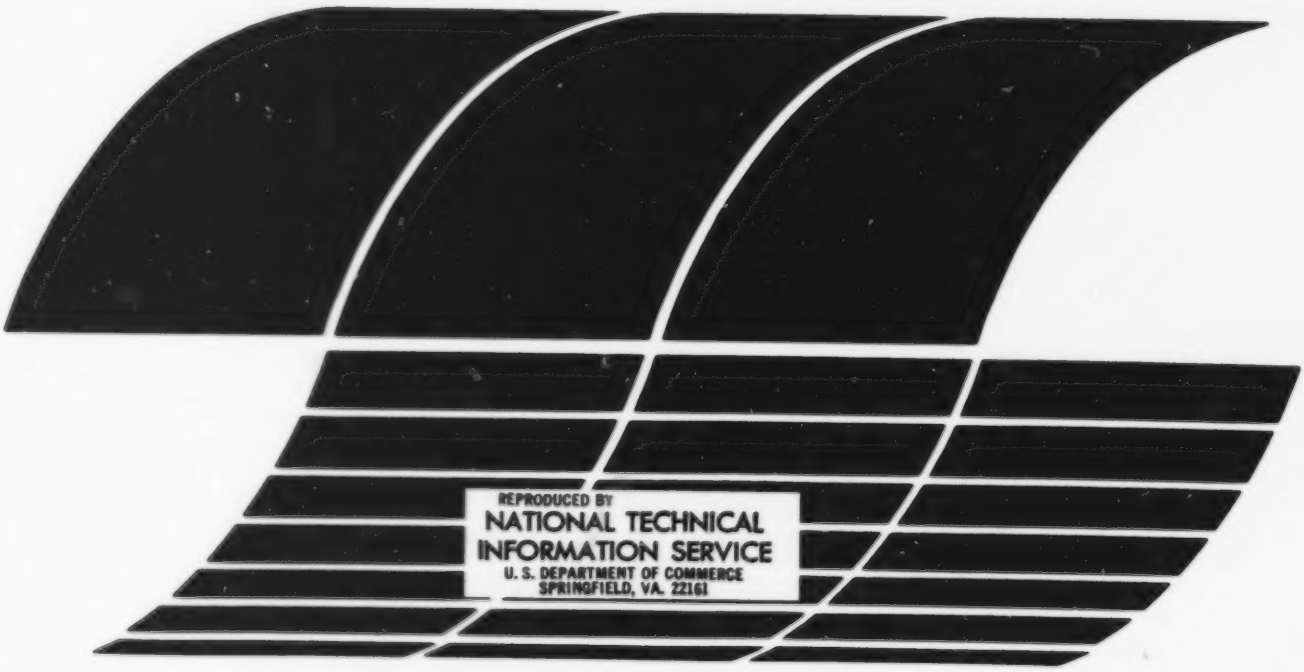

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THE ENERGY/ENVIRONMENT R&D DECISION SERIES

This volume is part of the Energy/Environment R&D Decision Series. The series presents the key issues and findings of the 17-agency Federal Interagency Energy/Environment Research and Development Program in a format conducive to efficient information transfer.

The Interagency Program was inaugurated in fiscal year 1975. Planned and coordinated by the Environmental Protection Agency (EPA), research projects supported by the program range from the analysis of health and environmental effects of energy systems to the development of environmental control technologies. The works in this series will reflect the full range of program concerns.

The Decision Series is produced for both energy/environment decision-makers and the interested public. If you have any comments or questions, please write to Series Editor Richard Laska, Office of Energy, Minerals and Industry, RD-681, U.S. EPA, Washington, D.C. 20460 or call (202) 755-4857. Extra copies are available. This document is available to the public through the National Technical Information Service, Springfield, Virginia 22161. Mention of trade names or commercial products herein does not constitute EPA endorsement or recommendation for use.

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA - 600/9-77-011	2.
3. RECIPIENT'S ACCESSION NO. PB 264228	
4. TITLE AND SUBTITLE Who's Who III in the Interagency Energy/Environment R&D Program	5. REPORT DATE July 1977 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) H.O. Holte	8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS Automation Industries, Inc. Vitro Laboratories Division 14000 Georgia Ave., Silver Spring, MD 20910	10. PROGRAM ELEMENT NO. 1NE - 626 11. CONTRACT/GRANT NO. EPA 68-01-2934
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency Office of Research & Development Office of Energy, Minerals & Industry Washington, D.C. 20460	13. TYPE OF REPORT AND PERIOD COVERED Decision Series - thru May, '77 14. SPONSORING AGENCY CODE EPA/600/17

15. SUPPLEMENTARY NOTES
Series Editor, Richard M. Laska: EPA, ORD, OEMI

16. ABSTRACT

This publication documents major organizational aspects/functions of the Interagency Energy/Environment Program and associated points of contact.

This listing of individuals and agencies involved with each R&D project in the Interagency Program is intended to promote and facilitate communications, not only among the researchers and program managers, but with the interested public as well. The dialogue stimulated by this document should contribute to effective information exchange within the organizations involved in energy-related environmental research, and should assist in shedding light on some of the salient environmental issues involved in energy research and development decision making.

Inaugurated in fiscal year 1975, the Federal Interagency Energy/Environment Research and Development Program brings together the coordinated efforts of 17 Federal agencies and departments. The goal of the Interagency Program is to assure that both environmental data and control technology are available to support the rapid development of domestic energy resources, especially coal, in an environmentally acceptable manner. The program is planned and coordinated by the Office of Energy, Minerals and Industry within EPA's Office of Research and Development.

17. KEY WORDS AND DOCUMENT ANALYSIS (circle one or more)

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Ecology Environments Earth Atmosphere Environmental Engineering Geography Hydrology, Limnology Biochemistry Earth Hydrosphere Combustion Refining Energy Conversion Mineral Chemistry Materials Handling Inorganic Chemistry Organic Chemistry Chemical Engineering	Control Technology Energy Resource Extraction Coal Cleaning Flue Gas Cleaning Direct Combustion Synthetic Fuels Nuclear Thermal Thermal Efficiency Advanced Systems Processes, Effects Transport Processes Biological Effects Climatic - Water & Weather Health Effects Integrated Assessment Fuel Coal Oil, Gas Oil Shale Nuclear Geothermal Solar Waste as Fuel Municipal (Solid Waste) Energy Cycle Extraction Processing Conversion Utilization	6F 8A 8F 8H 10A 10B 7B 7C 13B

18. DISTRIBUTION STATEMENT RELEASE TO PUBLIC	19. SECURITY CLASS (This Report) UNCLASS.	21. NO. OF PAGES 30
	20. SECURITY CLASS (This page) UNCLASS.	22. PRICE PC A03 MF A01

EPA Form 2220-1 (9-73)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1977—728-516/1238 3-1

Who's Who III

in the

Interagency Energy/Environment R&D Program

United States Environmental Protection Agency
Office of Research and Development
Office of Energy, Minerals and Industry

June 1977

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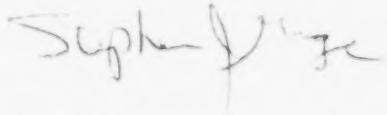
IN CONTEXT . . .

Research is the seeking of knowledge about something which is, at least in part, unknown. This factor of the unknown has hindered the development of a consensus on national energy policy. Many of these energy related uncertainties involve environmental issues.

Such uncertainties can only be removed by, first, performing adequate research and, second, communicating the results of that research to energy/environment policy makers, research managers, and the interested public. One of the best ways of communicating research information is by establishing personal links among the individuals involved. In order to provide the tool to establish these links, EPA is publishing its third edition of the interagency directory, *Who's Who III in the Interagency Energy/Environment R&D Program.*

This listing of individuals and agencies involved with each R&D project area in the Interagency Program is intended to open communications with not only the researchers and program managers but the concerned public as well. It is our hope that the dialogue stimulated by this and other Interagency Program documents will contribute to effective information exchange, and will shed light on some of the salient environmental issues involved in energy research and development decision making.

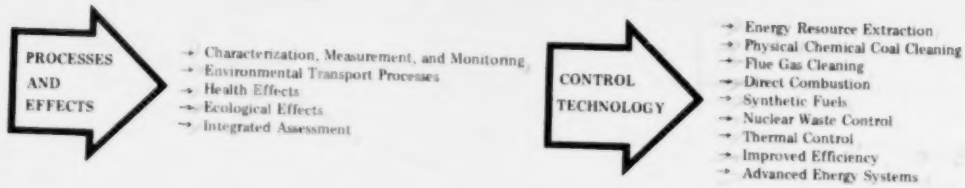
Inaugurated in late 1974, the Federal Interagency Energy/Environment Research and Development Program brings together the coordinated efforts of 17 Federal agencies and departments. The goal of the Interagency Program is to assure that both environmental data and control technology are available to support the rapid development of domestic energy resources, especially coal, in an environmentally acceptable manner. The program is planned and coordinated by the Office of Energy, Minerals and Industry within EPA's Office of Research and Development.



Stephen J. Gage
Deputy Assistant Administrator
Office of Energy, Minerals and Industry
U.S. Environmental Protection Agency

HOW TO USE WHO'S WHO III

This directory provides a means of access to information on specific projects currently underway within the Interagency Program. The directory generally follows the same category and project sequence as the *Federal Interagency Energy/Environment Research and Development Program–Status Report III*. The 14 major categories are shown here.



Under each category, most of the project areas discussed in *Status Report III* are listed by a descriptive title. The list includes research conducted by EPA as well as that conducted by other agencies.

After each project title three names appear:

→ **Project Contact** – The individual or individuals responsible for implementing the project and/or having cognizance of its technical scope and status.

→ **EPA Coordinator** – The individual in EPA's Office of Energy, Minerals and Industry responsible for coordination of project activity in this and related areas.

→ **Agency Coordinator** – The policy-level individual, within the performing agency, who has overall supervisory responsibility for the projects.

The following Federal agency abbreviations are used throughout this directory:

EPA	– Environmental Protection Agency
ERDA	– Energy Research and Development Administration
HEW	– Department of Health, Education and Welfare
NIEHS	– National Institute of Environmental Health Sciences
NIOSH	– National Institute of Occupational Safety and Health
HUD	– Department of Housing and Urban Development
NASA	– National Aeronautics and Space Administration
TVA	– Tennessee Valley Authority
USDA	– U.S. Department of Agriculture
ARS	– Agricultural Research Service
CSRS	– Cooperative State Research Service
ERS	– Economic Research Service
FS	– Forest Service
SCS	– Soil Conservation Service
USDC	– U.S. Department of Commerce
NBS	– National Bureau of Standards
NOAA	– National Oceanic and Atmospheric Administration
OEA	– Office of Environmental Affairs
USDI	– U.S. Department of Interior
BOM	– Bureau of Mines
FWS	– Fish and Wildlife Service
USGS	– United States Geological Survey

Following the listing of all the projects, there is a separate list of additional sources, outside of the Interagency Program, of energy-environment research and development information. After this is the alphabetical listing of all the Project Contacts, EPA Coordinators, Agency Coordinators, and other information sources together with their mailing addresses and telephone numbers. These addresses and numbers have been updated within four weeks of the publishing date of this report.

WHO'S WHO IN THE INTERAGENCY ENERGY/ENVIRONMENT R&D PROGRAM

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
CHARACTERIZATION, MEASUREMENT, AND MONITORING			
• Western Energy/Environment Monitoring Study			
– Western Regional Air Monitoring and Data Analysis	D. McNelis	G. D'Alessio	S. Gage (EPA)
– Western Region Water Monitoring and Data Analysis	↓	↓	↓
– Northern Great Plains Energy/Air Quality Baseline Information	T. Thoem		
– Western Air Monitoring Quality Assurance Support	S. Bromberg		
– Western Water Monitoring Quality Assurance Support	D. Ballinger		
– Western Groundwater Monitoring and Techniques Development	L. McMillion		
– Western Overhead Surface Monitoring and Techniques Development	H. Melfi		
– Atmosphere and Meteorological Studies of Pollutants from Energy Production in the Western United States	R. Pueschel (NOAA)		W.N. Hess (NOAA)
– Meteorological Interpretation and Prediction of Air Quality in the Western United States Related to Energy Activities	L. Machta (NOAA)		↓
– Energy-Related Surface Water Monitoring/Western Region	H. Hudson (USGS)		G. Davis (USGS)
– Energy-Related Groundwater Monitoring/Western Region Study	↓		↓
– Energy-Related Surface and Groundwater Monitoring Studies/Western Region			
– Technical Support for Western Energy-Related Environmental Assessment/Overhead Monitoring Method Development	E. Tilton (NASA)		W.E. Stoney (NASA)
• Energy-Related Radiological Monitoring and Techniques Development	E. Bretthauer		S. Gage (EPA)
• Energy-Related Radiological Monitoring Quality Assurance	A. Jarvis		↓
• Remote Monitoring for Energy-Related Pollutants and Effects Techniques Development	H. Melfi		
• Energy-Related Water Pollutant Monitoring Techniques Development	D. Ballinger		
• Energy-Related Air Pollutant Measurements and Instrumentation Development	A. O Keefe		
• Energy-Related Low-Level Trace Contaminant Identification, Measurement, and Analysis of Solid Waste and Effluent Water	W. Donaldson		
• Water Monitoring Field Instrumentation Development	P. Greeson (USGS)		G. Davis (USGS)
• Energy-Related Surface and Groundwater Studies/Eastern Region	F. Kilpatrick (USGS)		↓
• Development of Energy-Related Air Measurement and Analytical Methods	R. Wood (ERDA)		J.L. Liverman (ERDA)
• Development of Aqueous Effluent Analytical Methods for Energy-Related Sources	↓		↓
• Energy-Related Remote Sensing Instrumentation Development	J.P. Mugler, Jr. (NASA)		W.E. Stoney (NASA)
• Energy-Related Water Pollutant Analysis Method Development	W. Kirchoff (NBS)		H. Sorrows (NBS)
• Energy-Related Air Pollutant Analysis Method Development	↓	↓	↓
• Energy-Related Water Pollutant Standard Reference Materials			
• Energy-Related Air Pollutant Standard Reference Materials			
• Radiological Pollutant Standard Reference Materials			

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
CHARACTERIZATION, MEASUREMENT, AND MONITORING (Continued)			
• Development Instrumentation and Devices for the Measurement of Hazardous Agents in the Occupational Environment Associated with Energy Usage	W. Wagner (NIOSH)	G. D'Alessio	J. Finklea (NIOSH)
• Lidar Techniques for Measuring Particulate Pollutants from Energy Production and Their Transport and Dispersion Processes	V. Derr (NOAA)		W.N. Hess (NOAA)
• Standardization and Intercalibration Techniques for Marine Monitoring	M.A. Basileo (NOAA)		
• Ocean Oil Spill Concentrating and Trajectory Forecast	C.S. Barrientos (NOAA)		
• Isolation and Identification of Waterborne Pollutants Associated with the Power Industry (Steam Electric Power Generation)	C.W. Holley (TVA)		P. Krenkel (TVA)
• Development and Evaluation of an Integrated Approach to the Optimization of Nuclear Power Plant Radiological Surveillance Programs	E.A. Belvin (TVA)		
• Remote Sensing of SO_2 Effects on Vegetation	H.C. Jones III (TVA)		
• Design a Service Assessment Sampling System	A.B. Craig		S. Gage (EPA)
• Development of Particulate Measurement Technique for Process Evaluation			
• Inorganic Sampling and Analysis of Process Streams			
• Development of Process Measurements for POM and Other Organic Compounds			
• Development of High Pressure, High Temperature Sampling			
• Development of Fugitive Emission Measurement Techniques			

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
ENVIRONMENT TRANSPORT PROCESSES			
• Fate of Specific Pollutants in Freshwaters	H. Enos	C. Hall	S. Gage (EPA)
• Chemical, Physical, and Meteorological Studies of Energy-Related Pollutants in the Atmosphere	P. Altshuller	G. D'Alessio	
• Transport and Fate of Energy-Related Pollutants in Groundwaters	W. Galegar	C. Hall	
• Determine Transformation Pathways, Physical and Chemical Perturbation and Toxicity of Crude Oil to Freshwater Organisms in Arctic Lakes	R. Gordon		
• Determine Mechanisms of Transformations, Degradation, Fate, and Effect of Crude Oil in Steam Ecosystems			
• Determine Transport Pathways, Transfer Rates, and Fate of Pollutants and Degradation Products of Crude Oil in Soil and Active Layer of Permafrost Terrain	F. Lotspeich		
• Extension of Multilayer, Two-Dimensional (Horizontal) Model of Circulation to Accept a Heated Discharge as a Pollutant	R. Callaway		
• Determination of Persistence and Dispersion of Chlorine from Onshore Cooling Discharges	D. Baumgartner		
• Determine the Dynamics of Dispersion and Dissipation in Marine and Estuarine Waters and the Effects on Marine and Estuarine Organisms, and Long-Term Ecosystem Impacts of Waste Heat and Biocides Derived from Coastal and Offshore Power Plants	W. Davis		
• Develop Ecosystem Models of Fate and Effects of Thermal and Biocide Discharges Ranging from Simple Planktonic Assemblages to Controlled Field Studies			
• Spill Persistance in Tundra and Impacts in Subsurface Arctic Ecosystem	J. Haugh (ERDA)		J. Liverman (ERDA)
• Fate and Effects of Pollutants in Terrestrial Ecosystems in Four Corners Area and Mojave Desert	F. Turner (ERDA)		
• Determination of the Transportation and Fate of Fuel Wastes Through Soil at Solid Waste Sites	R.L. Watters (ERDA)		
• Determination of Organic Pollutant Load and Dynamics of Resulting Refinery Wastes into Marine Waters	P. Harrison (ERDA)		
• Determination of the Loan and Dynamics of Oil Refinery Wastes in Lake Michigan	J. Liverman (ERDA)		
• Evaluation of the Effects of Cooling Towers on Weather Modification	D. Hamilton, Jr. (ERDA)		
• Transport, Transformation, Fate, and Effects of Toxic Metals, Petroleum Hydrocarbons in Selected Marine Ecosystems	D.A. Wolfe (NOAA)		W.N. Hess (NOAA)
• Evaluation of Models for Predicting Radiological Impact of Gaseous Releases from Nuclear Power Plants	E.A. Belvin (TVA)	G. D'Alessio	P. Krenkel (TVA)
• Determination of Atmospheric Transport and Transformation of Emissions from Coal-Fired Power Plants	H.C. Jones III (TVA)		
• Development of Simulation Models of Thermal Dispersion and Fluid Mechanics at Critical Locations in Streams and Reservoirs	R.J. Ruane (TVA)	C. Hall	
• Strip Mine Drainage Water Quality with Emphasis on Toxic Substances			

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
HEALTH EFFECTS			
• Water Exposures and Their Effects: Heavy Metals and Toxic Organic Chemicals	R. Tardiff	G. Rausa	S. Gage (EPA)
• Multiroute Exposures and Their Effects	J. Stara		
• Characterize Human Exposure to Pollutants Emitted in Ambient Air as a Result of Coal Conversion and Utilization	C. Hayes		
• Under Controlled Experimental Conditions Assess Human Exposure-Effects Relationships	G. Hueter		
• Develop and Apply Cytological, Biochemical, and Physiological Indicators of Biodamage Resulting from Exposure to Pollutants Associated with Energy Development	M. Waters		
• Studies of Carcinogenesis of Airborne Pollutants from Energy Sources	D.L. Coffin		
• Identify the Most Potent Carcinogens, Mutagens, Teratogens, and Physiologically Detrimental Agents in Process Streams, Products and By-Products, and Effluents from Major Fossil Fuel Extraction and Conversion Technologies	G. Stapleton (ERDA)		J. Liverman (ERDA)
• Develop Cytological and Biochemical Indicators to Estimate Toxicity from Oil and Coal Extraction, Conversion, and Utilization	G. Duda (ERDA)		
• Determine Effects and Organ Distribution of Hazardous Trace Metals and Polycyclic Hydrocarbons Associated with Coal and Oil Shale Extraction, Conversion, and Utilization	M. Schulman (ERDA)		
• Assess the Hazards of Trace and Heavy Metals and Organic Agents of Nonnuclear Energy Technologies Using Chromosome Abberation, Isozyme Patterns and Teratogenic Effects on Mammalian Embryos as Indicators	A. Smith (ERDA)		
• Identify Damage to Cells and Cell Components Resulting from Pollutants from Nonnuclear Energy Technologies	L. Hart (NIEHS)		D.P. Rall (NIEHS)
• Assess the Metabolism, Fate, and Toxicology of Particulates and Organic Compounds Associated with Nonnuclear Energy Technologies			
• Dose Effect Relationship for Physical Effects of Toxic Agents in Nonnuclear Energy Technologies	R. Dixon (NIEHS)		
• Mechanisms of Incorporation, Metabolism, Deposition, and Turnover of Toxic Agents Associated with Energy Related Hazardous Materials			
• Develop and Test Models and Concepts for Extrapolation of Cellular and Animal Data to Man, Using Toxic Agents from Energy Technologies	D. Hoel (NIEHS)		
• Determine Dose Effects Relationships for Mutagenic Agents Associated with Nonnuclear Energy Technologies	H. Malling (NIEHS)		
• Develop Physiological Indicators of Damage from Toxic Agents			
• Assessment of Effects of Occupational Exposure to Coal Technologies	B. Bruckner (NIOSH)		J. Finklea (NIOSH)
• Conduct Environmental and Industrial Studies of Occupational Exposures to Insulation Materials	J. Lee (NIOSH)		
• Assessment of Risk to Occupational Health	W. Wagner (NIOSH)		
• Development of Work Practice Procedures	D. Knowles (NIOSH)		

ECOLOGICAL EFFECTS

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
• Development of Models for Comparison of Pollutant Impact on Population Dynamics of Fishes	E. Schneider	W. Preston	S. Gage (EPA)
• Determination of Acute and Chronic Toxicological Effects on Marine/Estuarine Organisms and Ecosystem Impacts of Pollutants from Petroleum Extraction and Discharges from Refineries and Fossil-Fueled Power Plants		C. Hall	
• Determination of Thermal Effects on Marine Organisms and by Synergism with Metals			
• Determination of the Immediate and Long-Term Dose-Response Relations of Pollutants on Selected Western Arid and Grassland Species from Coal and Oil Shale Processes	N. Glass		
• Determination of the Effects of Heat and Vapor Discharge from Cooling Systems on Local Weather	M. Shirazi		
• Determination of the Nature, Loading, Distribution, and Long-Term Effects of Crude Oil in the Gulf of Alaska Marine and Estuarine Ecosystem	R. Gordon		
• Development of a Comprehensive Information Profile for Major Freshwater Aquatic Environments that could be Affected by Energy Development; this will be done Through a Number of Resource Specific Biological Studies.	T. Thoem		
• Development of Ambient Sampling Procedure at Geothermal Sites. Identification, Quantification of Air Pollutants, Water Discharges, and Noise Levels will be made.			
• Assessment of Environmental Impacts Resulting from Energy Resource Development. These will include Land Use, Water, and Air Quality.			
• Assessment of the Impacts of Expansion of the Uranium Industry			
• Determination of Toxicity to Marine Organisms of Petrochemicals and Energy-Related Organic Solvents from Offshore Activities and Ocean Dumping	T. Duke		
• Determination of Acute and Chronic Toxicological Effects on Freshwater Organisms and Ecosystem Impacts of Pollutants and Complex Effluents Released by Coal and Oil Shale Processes	D. Mount	W. Preston	
• Determination of Long-Term Effects on Waste Heat in the Surface Waters of the Great Lakes Basin on Aquatic Species and Community Populations			
• Assess Quality of Water in Strip-Mined Areas as it relates to Habitat for Aquatic Organisms and Wildlife Species Associated with These Water Bodies	H. Brown (USDA)		R. Callaham (USDA)
• Assess the Redepositioning and Stabilizing of Mine Spoils and Identify Technologies that will Enhance Water Quality for Associated Aquatic Life		C. Hall	
• Assess Effects of Mining-Related Transportation Systems in Water, Air, Soil, Plant, Animal, and Aesthetic Resources			
• Develop Operational Technical Information System for Reclamation of Lands Affected by Mining			

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
ECOLOGICAL EFFECTS (Continued)			
• Develop Reclamation Plan Before Mining Operation Begins	H. Barrows (USDA)	C. Hall	C. Carlson (USDA)
• Determine Effect of Strip-Mining and Reclamation Processes on the Quality and Quantity of Water Leaving the Area			
• Determine Effect of Strip-Mine Reclamation Practices on the Nutritional Quality of Forages or Other Crops Grown on Reclaimed Area			
• Evaluate Species and Seed Sources for Revegetation of Energy Resource Extraction Areas with Native Plants			
• Determine Soil Characteristics Developing on Spoils of Varying Ages Relating to Root Growth and Biological Productivity			
• Assess and Model Effects of Previous Mining Methods, Spoil Characteristics, and Reclamation of Surface and Groundwater (Hydrologic Management in Strip-Mining)	D. Kirkham (USDA)		E. Miller (USDA)
• Conduct Experiments on Plants of Fast Growing Trees to Assess Growth Support Capabilities of Specific Sites in Relation to Water Quality and Spoil Characteristics (Use of Sewage Sludges and Topsoil in Reclaiming Coal Strip-Mine Spoil)	F. Haghari (USDA)		
• Expand Existing "Resources Inventory, Information Management and Monitoring Systems" for Collection, Assimilation, and Analyses of Natural Resources and Pollution Data Related to Coal Extraction (Resource Inventory Monitoring and Analysis System, RIMAS)	J. Johnson (USDA)		
• Summarize Results of Laboratory Experiments and Field Observations to Evaluate the Physiological, Toxicological, and Ecological Effects of Oil, Primarily on Ducks	L. Stickel (USFWS)		A. Hirsch (USFWS)
• Describe Effective Guidelines and Methodology for the Development, Synthesis, Analysis, and Interpretation of Complex Ecological and Biological Information Relative to Major Coastal Ecosystems	H. Tait (USFWS)		
• Prepare Reports on Three Coastal Regions Subject to Energy Development, Place Emphasis on Value of Resources such as Fish, Wildlife, and Ecological Processes Subject to Man-Induced Environmental Alternatives			
• Identify and Demonstrate a Rapid, Cost-Effective, and Reliable Method of Inventorying and Characterizing Wildlife Habit, Special Emphasis Being Placed on Requirements for Food, Cover, Breeding, and Other Critical Factors	R. Stewart, Jr. (USFWS)		
• Determine Water Quantity Requirements of Fish and Wildlife in the Upper Colorado and Upper Missouri River Basins	R. Hayden (USFWS)	W. Preston	
• Develop In-Stream Flow Methodologies to Determine Flow Requirements for Biological/Fisheries Stability in Areas Affected by Increased Energy Development—Both East and West		C. Hall	
• Develop Mechanism to Identify and Monitor the Activities of Endangered Species in Areas Under Stress from Energy Development			
• Develop Appropriate Methods for Estimating Impacts of Power Plants on Fish and Shellfish	C.P. Goodyear (USFWS)		

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
ECOLOGICAL EFFECTS (Continued)			
• Effects of Oil Spills on Tundra and Thaw Ponds	J.R. Haugh (ERDA)	C. Hall	J. Liverman (ERDA)
• Effects of Construction and Operations of Alaska Pipeline on Aquatic Habitats	D. Ballantine (ERDA)		
• Effects of Trace Metals on Crop and Forest Ecosystem	C. Coutant (ERDA)	W. Preston	
• Biological Indices of Pollutant Effects on Freshwater Ecosystems	W.D. Forster (ERDA)		
• Long-Term Effects of Hydrocarbons on Selected Ecosystems and Associated Organisms		C. Hall	
• Surveys on Oil Extraction and Transport and Related Effects on Coastal Ecosystems	L.G. Hart (NIEHS)		D. Rall (NIEHS)
• Intake of Metals by Marine Organisms			
• Compare Pharmacokinetics and Toxicity in Mammals of Metals Consumed in Diet Through Shellfish *Vs* Drinking of H_2O			
• Synergistic Action of Temperature with Other Pollutants on Marine Species (Vertebrate and Invertebrate)			
• Relationship Between Toxic Fractions of Crude Oil and Petroleum Products and Tumor Formation in Marine Species			
• Conduct Environmental Assessment of Northern Puget Sound and Strait of Juan De Fuca	H.S. Harris (NOAA)		W.N. Hess (NOAA)
• Develop Predictive Capability for Impacts of Petroleum-Related Activities on Northern Puget Sound and Strait of Juan De Fuca	D. Wolfe (NOAA)		
• Perform a Comparison/Analysis of an Existing Marine Ecosystem Under Stress of an Active Oil Field with a Similar Ecosystem in an Undisturbed Area	J. Angelovic (NOAA)		
• Design, Establish, Operate, Evaluate, and Refine a Data Management System for Interagency Energy-Related Marine and Meteorological Programs	K. Hughes (NOAA)	G. D'Alessio	
• Relationships of Atmospheric Pollutants (SO_x + NO_x) from Coal Fired Power Plants on Terrestrial Ecosystems	T. Montgomery (TVA)	C. Hall	P. Krenkel (TVA)
• Thermal Effects from Mechanical Draft Cooling Towers on Vegetable and Soils			
• Thermal Impacts on Freshwater, Shellfish, Insects, and Other Biota (Organisms)	B.G. Isom (TVA)		
• Production of Anthropod Pests and Vectors in Strip Mines Pools			
• Development of Baseline Information and Identification, Characterization and Quantification of Transfer, and Fate and Effects of Coal Fired Power Plant Emissions in Terrestrial Ecosystems	H.C. Jones III (TVA)		
• Fate and Effects of Atmospheric Emissions from Cooling Systems on Terrestrial Habitats			
• Ecological Recovery After Reclamation of Toxic Spoils Left by Coal Surface Mining	T.G. Zarger (TVA)		

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
INTEGRATED ASSESSMENT			
• Develop and Coordinate Effective Internal and External Information Transfer for the Interagency Program	R. Laska	R. Laska	S. Gage (EPA)
• Integrated Technology Assessment Support for Western Energy Development	I. White	S. Plotkin	
• Integrated Technology Assessment of Electric Utility Energy Systems	P. Cukor	L. Smith	
• Ohio River Basin Energy Study	B. Keenan/ J. Stukel		
• Methodology Development for the Technology Assessment Modeling Project	R. Ball	R. Ball	
• Integrated Assessment of Petroleum Transportation			
• Integrated Technology Assessment of Energy Development in the Appalachian Region	V. Jelen	S. Plotkin	
• Integrated Technology Assessment of Coal-Based Energy Development	R. Hansen/ W. Tucker	S. Reznek	
• Assess the Socioeconomic Consequences of Coal and Oil Shale Development	V. Davis (USDA)	W. Bloch	G. Taylor (USDA)
• Assess the Socioeconomic Impact of Energy Conservation for the Residential Sector	K. Credle (HUD)		C.E. Barfield (HUD)
• Develop a Cost/Risk/Benefit Methodology for Western Energy Development	J. Olson (ERDA)		J. Liverman (ERDA)
• Coordinate a National Design for an Environment/Energy R&D Information System			
• Develop Energy/Environment Economic Projection Models for Multicounty Areas	H. Hinote (TVA)		P. Krenkel (TVA)
• Electric Power System Operation and Expansion of Environmental Residual Output Model	D.H. Walters (TVA)		
• Develop Applications of Computer Graphics for Regional Integrated Assessment of Power Systems	R. Hickey (TVA)		

PROJECT	PROJECT CONTACT	EPA COORDINATOR	AGENCY COORDINATOR
ENERGY RESOURCE EXTRACTION			
• Oil and Gas Production			
– Assess, Develop, and Demonstrate Methods, Equipment, and Techniques to Control and Cleanup 75% Spills of Oil on Land and Water, Including Limiting Extent of Contamination and Mitigating Adverse Environmental Effects	I. Wilder	K. Jakobson	S. Gage (EPA)
– Assess, Develop, and Demonstrate Proven Techniques for the Protection and Restoration of Shorelines due to Oil Contamination; Include Ocean, Estuarine Inland River and Lake and Cold Climate			
– Evaluate Effectiveness of 1973 Oil Spill Prevention Regulation (40 CFR, Part 112, Fed. Reg. Vol. 38, No. 237, 11 Dec. 1973) in Achieving 1985 Goal of 85% Spill Incident Reduction and Develop Information to Modify as Necessary			
– Assess, Develop, and Demonstrate Control Technology to Minimize Adverse Environmental Impacts from the Installation and Operation of Offshore Oil and Gas Production Facilities; Include Offshore Platform, Product Transportation Systems, and Shore Termination Facilities			
– Access, Develop, and Demonstrate Proven Cost/Effective Methods to Treat Bilge and Ballast Water at Shore Reception Facilities, Including Existing Ports and Planned Deep Water Ports			
– Develop Guidelines to Control Environmental Impact During Secondary and Tertiary Recovery Program, Including Onshore and Offshore			
– Access, Develop, and Demonstrate Spill Control Techniques, Equipment and Methods for the Onshore Storage and Transportation of LNG			
• Solid Fossil Fuels			
– Assess, Develop, and Demonstrate Methods to Prevent and Control Air, Water, Solid Waste, and Other Environmental Damages from Active and Abandoned Eastern U.S. Coal Surface Mines, Including Surface Disturbances from All Coal Mining Operations and Beneficiation Facilities	R. Hill/ E. Harris	D. O'Bryan	
– Assess, Develop, and Demonstrate Methods to Prevent and Control Air, Water, Solid Waste, and Other Environmental Damages from Active and Abandoned Eastern U.S. Coal Underground Mines			
– Assess, Develop, and Demonstrate Methods to Prevent and Control Air, Water, Solid Waste, and Other Environmental Damages from Active and Abandoned Western U.S. Coal Surface and Underground Mines and Surface Disturbances Associated with Them; also include Alaska Coal Mining			
– Assess, Develop, and Demonstrate Methods to Prevent and Control Air, Water, Solid Waste, and Other Environmental Damages from Oil Shale and Tar Sands Extraction Disposal of Spent Waste from Beneficiation, Such as Spent Shale			
– Assess, Develop, and Demonstrate Methods to Prevent and Control Air, Water, Solid Waste, and Other Environmental Damages (Except Radiation) from Active and Abandoned Uranium Extraction and Beneficiation Operations			
– Assess, Develop, and Demonstrate Methods to Prevent and Control Environmental Damages from the Transportation of Solid Fuels by Rail, Truck, Pipelines, etc.			
• Reduce Adverse Environmental Effects from Uranium Mill Wastes	R. Kennedy (ERDA)		J. Liverman (ERDA)
• Eastern Coal Surface Mining: Vegetative Methods and Materials	H. Brown (USDA)		R. Callaham (USDA)
• Western Coal and Oil Shale Mining: Vegetative Methods and Materials	R. MacLaughlin (USDA)		W. Johnson (USDA)
• Surface Manipulations for Enhanced Coal and Oil Shale Mine Vegetation	H. Barrows (USDA)		C. Carlson (USDA)

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PHYSICAL/CHEMICAL COAL CLEANING			
• Perform Environmental Assessment of Coal Transportation, Storage, and Cleaning Technologies	R. Hangebrauck J. Kilgroe E. Wewerka (ERDA)	W. McCarthy	S. Gage (EPA) J. Liverman (ERDA)
• Investigate, Test, Evaluate, and Develop Coal Cleaning Technology and Process Controls			
• Characterize Potentially Harmful or Valuable Trace Elements in Coal Cleaning Wastes			
• Develop a Coal Washing Test Facility	A. Deubrouck (USBM)		E. Moust (USBM)
• Demonstrate Disposal and Reuse Processes for Coal Cleaning Wastes			
• Report on Results of Tests of Cleanability of Northern Appalachian Coals			
FLUE GAS CLEANING			
• Develop and Demonstrate Nonregenerable Flue Gas Desulfurization Technology	E. Plyler M. Maxwell	R. Statnick	S. Gage (EPA)
• Develop Techniques for Disposal or Use of Waste Pollutants from Combustion Sources and Associated Control Processes	H. Jones		
• Develop and Demonstrate Several Processes for Regenerable Flue Gas Desulfurization	R. Stern		
• Enhance the Means of Flue Gas Desulfurization Technology Transfer			
• Environmental Impact Assessment of NO_x Flue Gas Treatment Technology			
• Assessment of State-of-the-Art and Development of Technology for NO_x Flue Gas Treatment	J. Abbott		
• Development of Control Technology for Removing Fine Particulates from Waste Gases	W. Ponder		
• Multimedia Pollutant Assessment for Conventional Combustion Systems	J. Jones		
• Development of Processes for Disposal of Flue Gas Cleaning Wastes			
• Environmental Assessment Applications Testing of Combustion Modification Technology for Stationary Sources	R. Hangebrauck		
• Development of Flue Gas Desulfurization Technology—Shawnee Lime/Limestone Scrubbing Program	J. Williams		
• Energy Requirement Conservation Study of Selected Processes for Removing SO_2 from Power Plant Stack Gases	G.G. McGlamery (TVA)		P. Krenkel (TVA)
• Develop Comparative Economics of SO_2 Emission Control Processes			
• Lime/Limestone Advanced SO_2 Removal Concepts—TVA's 1-MW Pilot Plant	G.A. Hollinden/ (TVA) R.F. Robards (TVA)		
• Processing Sludges from Lime/Limestone Wet Scrubbing Processes for Disposal or Recycle and Studying Disposal of FBC Waste Products	J.L. Crowe (TVA)		
• Characterization of Effluents from Coal Fired Utility Boilers	H.B. Flora II/ (TVA) B.G. McKinney (TVA)		
• Fly Ash Characterization and Disposal	S.S. Ray (TVA)		
• Evaluation of Marketing By-Products from Flue Gas Desulfurization Processes	J.I. Bucy (TVA)		
• Development of Flue Gas Treatment Technology for Control of Combustion Generated Pollutants—Pilot Plant Studies of NO_x and SO_2/NO_x	T.M. Kelso/ (TVA) G.A. Hollinden (TVA)		
• Develop Comparative Economics of NO_x FGT Emisson Control Processes	H.L. Faucett/ (TVA) G.A. Hollinden (TVA)		

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DIRECT COMBUSTION			
• Environmental Assessment of Pollutants and Processes Associated with Fluidized Bed Combustion • Development of Control Technology for Pollutants Resulting from Fluidized Bed Combustion • Chemically Active Fluidized Bed Residual Oil Cleanup Technology • Development of Control Technology for Pollutants and Processes with Fluidized Bed Combustion	R. Hangebrauck B. Henschel S. Rakes W. Steen (ERDA)	M. Altshuler	S. Gage (EPA) J. Liverman (ERDA)
SYNTHETIC FUELS			
• Environmental Assessment of Potential Pollutants from Fossil Fuel Conversion • Development of Multimedia Pollution Control Technology for Synthetic Fuel Processes • Environmental Assessment of Potential Pollutants from Advanced Oil Processing of Petroleum Residuals • Development of Multimedia Pollution Control Technology for Oil Processes • Identify Potential Pollutants and Develop Control Technology for Oil Shale Processes • Identify Potential Pollutants and Develop Control Technology for Noncoal Synthetic Fuel Processes • Develop Technology for High Temperature/Pressure Particulate Control for Advanced Energy Systems • Environmental Assessment of Potential Pollutants from Fossil Fuel Conversion • Development of Multimedia Pollution Control Technology for Synthetic Fuel Processes	R. Hangebrauck K. Janes S. Rakes T. Powers D. Drehmel M. Gottlieb (ERDA)	M. Altshuler	S. Gage (EPA) J. Liverman (ERDA)
NUCLEAR WASTE			
• Long-Term Implications of Radioactive Waste Management • 1977 Farallon Radioactive Waste Dump Site Survey, Long-Term Measurement of Deep Sea Currents • Assessment of Environmental Impact of Shallow Land Burial of Low Level Radioactive Waste	J. Swift (ORP) Bob Dyer (ORP) Lew Meyer (ORP)	G. Rey/ R.J. Augustine (ORP)	S. Gage (EPA)
THERMAL			
• Evaluation of Performance and Economics of Advanced Cooling Technology • Utilization of Waste Heat and Water from Utility and Industrial Plants • Advanced Waste Heat Control • Waste Heat Utilization	E. Plyler M. Maxwell H.B. Flora II (TVA) B.J. Bond (TVA)	D. Graham	S. Gage (EPA) P. Krenkel (TVA)

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IMPROVED EFFICIENCY			
• Environmental Assessment of Energy Conserving Processes and Techniques in High Energy Consumption Industries	H. Bostian	K. Jakobson	S. Gage (EPA)
• Development of Energy Efficient Pollution Control Technology for Industrial Processes	H. Freeman		
• Characterization of Multimedia Pollutants Resulting from Using Wastes as Fuel	G. Huffman		
• Identify and Characterize Industrial Waste Streams	R. Olexsey		
• Evaluation of Major Processes for Co-Firing Waste with Coal or Other Wastes			
• Develop Processes for Co-Firing Wastes with Oil			
• Assessment and Development of Air Pollution Control Technology for Waste-as-Fuel Processes			
• Evaluate Processes for Thermochemical Conversion of Wastes	W. Liberick		
• Assessment of the Potential Environmental Impact of Advanced Cycles	W. Cain		
• Assessment and Development of Control Technology for Indoor Air Pollution Resulting from Improved Efficiency	D. Schearer		
• Assistance in Developing Criteria for Pollutants Resulting from Waste-as-Fuel Processes	R. Stenburg		
• Perform Waste Stream Surveys for Nonindustrial Waste Sources			
• Assess Existing Processes for the Separation of Recoverable Materials from Solid Waste			
• Assessment of Existing Processes for Preparing Refuse-Derived Fuels and Feedstocks			
• Assessment of the Co-Incineration of Sewage Sludge with Waste			
• Evaluate Major Bioconversion Waste-to-Energy Processes			
ADVANCED SYSTEMS			
• Geothermal Environmental Impact Assessment: Surface and Groundwater Monitoring for Contaminants	D. Gilmore	G. D'Alessio	S. Gage (EPA)
• Comprehensive Assessment of Geothermal Control Technology	R. Hartley		
• Comprehensive Environmental Assessment of the Use of Solar Energy			

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• Executive Energy Policy and Planning	James D. Bishop, Jr.
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– Science, Space, and Energy Technology	Richard Hartzberg
• CEQ Energy Programs Review	John Davidson
U.S.CONGRESS	
• U.S. House of Representatives	
– Committee on Science and Technology	John Dugan
– Subcommittee on Fossil and Nuclear Energy RD&D	Robert Ketchum
– Subcommittee on Advanced Energy Technologies and Energy Conservation RD&D	John Andelin/ David Luken
– Subcommittee on the Environment and the Atmosphere	James W. Spensley
• U.S. Senate, Committee on Environmental and Natural Resources	Richard D. Grundy
• Congressional Budget Office, Natural Resources and Commerce Division	Raymond C. Scheppach
RESEARCH INFORMATION SYSTEMS	
• National Energy Information Center	Robert E. Coughlan
• Smithsonian Science Information Exchange	Samuel Liebman
• National Technical Information Service	Roy Stamm
• EPA Technology Transfer and Environmental Information Research	Robert E. Crowe
• Library of Congress	Constance Carter
• Inventory of Energy R&D	Dr. Gloria M. Caton
• National Science Foundation, Advanced Environmental Research and Technology	Charles C. Thiel
DEPARTMENT OF DEFENSE	
• Air Force Environics	Lt. Col. D.G. Sylva
• Navy Energy and Natural Resources R&D	Capt. V.M. Skrinak
• Defense Research and Engineering Environmental and Life Sciences	Thomas R. Dashiell
• DOD Environment and Safety	George Marienthal
• Army Environmental Affairs	Bruce Hildebrand

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• Old West Regional Commission	Warren C. Woods
• Western Governor's Regional Energy Policy Office	Richard Mayer
• Appalachian Regional Commission	Dr. David Maneval
• Organization for Economic Cooperation and Development	Dr. Milton Klein
• United Nations Environment Program	Dr. Noel J. Brown
• Electric Power Research Institute	
– Air Quality Control Program	Kurt Yeager
– Water Quality Control and Heat Rejection	John Maulbetsch
– Environmental Assessment	Dr. Cyril Comar
– Physical Factors	Ralph Perhac
– Ecological Effects	Dr. Harry Kornberg
– Health Effects	Dr. James McCarroll
OTHER AGENCIES/DEPARTMENTS	
• State Department International Environmental and Scientific Affairs	Patsy T. Mink
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• Coast Guard Marine Environment and Systems	RADM A.F. Fugaro
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